

The
Ogallala
Aquifer

The Kerr Center

Section 1: Introduction

“We know the value of water when the well runs dry.”

– Benjamin Franklin

The purpose of this section is to introduce the prevailing water requirements in the United States. Further the section focuses on the declining as well as deteriorating water conditions in the Ogallala Aquifer. This aquifer plays an important role in fulfilling the needs of the American people.

The Ogallala¹ Aquifer (also known as the High Plains Aquifer) is now facing declining water levels and deteriorating water quality. More than 90% of the water pumped from the Ogallala irrigates at least one fifth of all U.S. cropland. This water accounts for 30% of all groundwater used for irrigation in America. Crops that benefit from the aquifer are cotton, corn, alfalfa, soybeans, and wheat. These crops provide the Midwest cattle operations with enormous amounts of feed and account for 40% of the feedlot beef output here in the U.S. Since the advancement of agricultural irrigation in the earlier part of the 20th century, the Ogallala has made it possible so that states such as Nebraska and Kansas can produce large quantities of grain required to feed livestock.²

If the High Plains Aquifer were unaffected by human activities, it would be in a state of equilibrium in which natural discharge from the aquifer would be approximately equal to natural recharge to the aquifer. However, activities such as pumpage from wells, surface-water diversions for irrigation and hydroelectric-power generation, and cultivation and grazing practices result in non-equilibrium in the aquifer. The result is that

